U.S. Department of Transportation
United States Coast Guard

Commandant
United States Coast Guard

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COMDTINST 6230.5A
6 DEC 1993

COMMANDANT INSTRUCTION 6230.5A

Subj: MALARIA PREVENTION AND CONTROL

1. PURPOSE. This directive provides specific policy and recommendations for the prevention and control of malaria among Coast Guard personnel. Intended users are all Coast Guard units.

2. ACTION. Area and district commanders; commanders, maintenance and logistics commands; commanding officers of Headquarters units; Commander, Coast Guard Activities Europe; and chiefs of offices and special staff divisions at Headquarters shall ensure compliance with the provisions of this instruction.

3. DIRECTIVES AFFECTED. Commandant Instruction 6230.5, Malaria Prevention and Control, is canceled.

4. BACKGROUND. Malaria is a major cause of human illness and death in many parts of the tropics and subtropics. This disease poses a health concern to Coast Guard Personnel deployed to or visiting malaria-risk areas. These areas include parts of the Caribbean, Central and South America, Africa, the Middle East, and Asia. Malaria-risk areas may vary over time and should always be verified by the Centers for Disease Control and Prevention's (CDC) International Travelers Hot Line at (404) 332-4555/4559.

5. PERSONAL PROTECTIVE MEASURES.

   a. Personal protective measures are critical for disease prevention. Malaria transmission occurs primarily

(cont'd) at night because of the dusk-to-dawn feeding habits of Anopheles mosquitoes. **AVOIDING CONTACT WITH MOSQUITOES DURING DUST-TO-DAWN HOURS IS THE MOST IMPORTANT MALARIA CONTROL MEASURE**. If at all possible, stay inside well-screened or air-conditioned structures during these hours. Otherwise, use a bed net while sleeping. Wear clothing that covers most of your body if you need to go outside. Shirt sleeves should be rolled down and buttoned at the cuffs and collar. Tuck bottoms of trousers into socks if you wear boots. Cover hands and entire arms with repellant if a short-sleeved shirt is worn. If a long-sleeve shirt is worn, apply repellent to hands, underside of arms, and wrists. Carefully apply repellent to all other exposed areas of the body including face, along hairline, neck, and ears. Avoid contact with eyes and lips since repellent is irritating to mucous membranes. Also, apply repellent to socks above shoes or boots, clothing around shoulders, front of thighs, and buttocks. Wear protective clothing such as repellant impregnated jacket, or head net and gloves when possible.

b. National Supply Numbers (NSNs) for recommended personnel protective equipment, clothing, and supplies are provided in enclosure (1).

c. For further information about personnel protective equipment and clothing used in malaria prevention, contact your cognizant MLC (kse).

6. MOSQUITO SURVEILLANCE AND CONTROL METHODS.

a. Mosquito surveillance and permanent mosquito control methods are practical only for long-term deployments. Such methods include surveillance of mosquito populations and identification and elimination of mosquito breeding sites. This requires training in mosquito taxonomy, surveillance techniques, mosquito control techniques (including selection and application of pesticides), and use of personnel protective equipment and clothing.

b. Temporary mosquito control methods are used during short- term deployments and travel to malaria-risk areas. Aerosol sprays, listed in enclosure (1), provide limited interior mosquito control when used to kill adult mosquitoes. These sprays have little or no residual effects. They have to be reapplied whenever new mosquitoes enter the space.

c. For further information or assistance with mosquito surveillance and control methods, contact appropriate MLC (kse).

7. CHEMOPROPHYLAXIS. Chemoprophylaxis is the prevention of malaria transmission through the use of oral medications. Factors which affect the choice of chemoprophylaxis include geographic area of travel; types of malaria endemic to the area of travel; malaria drug resistance; characteristics of traveler (e.g. age, sex, drug sensitivities) and availability of medical care. Current information concerning malaria chemoprophylaxis, the location of malaria endemic areas, and the use of chemoprophylaxis in special situations (pregnancy, pediatrics, etc.) can be obtained from the Centers for Disease Control and Prevention's (CDC) Malaria Hot Line at (404) 332-4555. Enclosure (1) provides NSNs and procurement information for the medications discussed below. All Coast Guard health care providers shall be cognizant of the specifics of malaria chemoprophylaxis and the product information for these medications prior to prescribing them.

   a. **CHEMOPROPHYLAXIS FOR PERSONNEL DEPLOYING TO AREAS WITH MALARIA SENSITIVE TO CHLOROQUINE PHOSPHATE:**

      (1) Chloroquine phosphate 500 mg (300 mg base) once weekly (at the same time) starting two weeks prior to malaria exposure, and continuing through four weeks post exposure.

      (2) Terminal prophylaxis with primaquine 45 mg once weekly for eight weeks should be used following long-term exposure in ovale or vivax malaria areas only. (Long-term exposure definition varies by the malaria-risk area and the living conditions of personnel assigned. Consult CDC for recommendations for situation specific long-term terminal prophylaxis.)

      (3) Individuals with G-6-PD deficiency should receive terminal prophylaxis with primaquine but should be monitored with a base line hematocrit and subsequent hematocrits every two weeks. If hemolysis occurs, should be discontinued and the individual counseled about malaria symptoms.

      (4) If primaquine is unavailable, these individuals should be carefully counseled and informed to seek medical treatment if malaria signs or symptoms occur.

   b. **CHEMOPROPHYLAXIS FOR PERSONNEL DEPLOYING TO CHLOROQUINE-RESISTANT MALARIA AREAS:**

      (1) Doxycycline 100 mg once daily starting two days prior to malaria exposure, continued daily throughout exposure, and for four weeks post exposure.

(2) Mefloquine should be used as an alternative therapy for those patients unable to take Doxycycline. Recommended treatment is 250 mg once weekly during malaria exposure, continued once weekly four weeks post exposure.

(3) Terminal prophylaxis with primaquine should be given for those with prolonged exposure to vivax or ovale malaria (see 7.a.(2) above).

(4) Personnel on flight status shall not be given Mefloquine due to its common side effects (dizziness, nausea, etc.). A 3 day trial period of doxycycline should be considered prior to flying, to preclude effects which may be detrimental to flight safety.

(5) Pregnant personnel shall receive chloroquine prophylaxis even for areas of chloroquine resistance. Mefloquine, primaquine, and doxycycline should not be used during pregnancy. Chemoprophylaxis for pregnant personnel requires careful consideration and thorough consultation.

8. DIAGNOSIS OF MALARIA. Malaria should be suspected in any illness characterized by periodic chills and fevers among personnel who visit malaria-risk areas. The triad of headache, backache, and fever with or without chills is the common symptom complex in these individuals. Furthermore, in exposed persons, delirium, coma, or shock should immediately suggest the possibility or malaria. Even in severe cases, the temperature may be subnormal. Other previous diagnosis should not be allowed to mislead the observer. Clinical attacks may recur after treatment or the initial evidence of disease may appear weeks after discontinuing chemoprophylaxis. In summary, whenever personnel who travel to malaria-risk areas exhibit illness, the possibility of malaria should be considered. For additional information on symptoms of malaria, contact either the Centers for Disease Control at (404) 488-4046 or Commandant (G-KOM) at (202) 267-0692.

9. TREATMENT OF MALARIA. Once the diagnosis of malaria is suspected or confirmed, the patient must be taken to the nearest physician-staffed medical facility for the initiation of treatment.

10. RESPONSIBILITIES.

a. Commandant (G-KOM). Provide policy guidance for malaria prevention and control. This includes recommended chemoprophylaxis, treatment protocols, medical evaluation procedures, personnel protective measures, and vector control methods.

b. Commanders (k), Maintenance and Logistics Commands. Advise and assist line commanders and health services personnel on all aspects of malaria prevention and control, including malaria-risk assessments for geographic areas of deployment or travel.

c. Unit commanding officers and officers-in-charge. Commanding officers and officers in charge whose units are subject to deployment to or travel through malaria- risk areas shall:

(1) Ensure maintenance of appropriate malaria prevention and control supplies before, during, and after deployment or visits to malaria-risk areas.

(2) Ensure all personnel receive adequate instruction in individual malaria prevention and control before deployment to or travel through malaria-risk areas.

(3) Ensure all personnel deployed to or traveling through malaria-risk areas have had a screening test for erythrocyte glucose-6-phosphate dehydrogenase (G-6-PD). G-6-PD testing is mandatory for all personnel with no record of testing prior to assignments afloat or to malaria endemic areas. A copy of their G-6-PD test result shall be placed in the health record of each individual tested. The result shall be entered on the top line of the Problem Summary List (NAVMED 6150/20). Once a G-6-PD test has been performed and the results recorded, the test need never be repeated. Any person who is G-6-PD deficient has a risk of hemolysis associated with taking for chemoprophylaxis or treatment. Accordingly, those persons who are deployed to or traveling through a malaria-risk area must be identified and evaluated by medical personnel as to the need for special chemoprophylaxis and treatment protocols.

(4) Ensure appropriate documentation in health records of personnel who receive malaria chemoprophylaxis.

(5) Report suspected or confirmed malaria cases in Disease Alert Reports (DAR) (RCN 6000-4) via message (UNCLAS FOUO classification) of letter in accordance with Chapter 7, Medical Manual, COMDTINST M6000.1(series). A malaria DAR shall include the patient's itinerary during the previous three months and the types and duration of any chemoprophylaxis or treatment medications taken.

/s/ ALAN M. STEINMAN
Chief, Office of Health and Safety

Encl: (1) Recommended Supplies for Malaria Prevention and Treatment Programs

RECOMMENDED SUPPLIES FOR MALARIA PREVENTION AND TREATMENT PROGRAMS

Recommended Items. The following is an extensive but not all- inclusive list of equipment and supplies that can be used in a malaria prevention and control program. This list can be tailored for the requirements of a particular deployment or visit to a malaria-risk area. Items not in the Federal supply system may be required because of newly emerging patterns of malaria parasite resistance to drugs or the mosquito vectors to insecticides. Such items will have to be purchased from local sources. Contact your MLC (k) for specific malaria prevention and control guidance.

Personal Protective Measures.

NSN	Nomenclature/Ordering Information
6840-00-753-4963	Insect repellant, clothing and personal 75 percent DEET, 2 ounces, UI: BT AAC: "D"
6840-01-067-6674	Insecticide, D-phenothrin, 2 percent, UI: CN, AAC: "D"
7210-00-266-9736	Insect bar (netting), cotton type, UI: EA
7210-00-267-5641	Poles, insect bar (for suspending netting) UI: ST
8415-01-035-0846	Parka, fabric mesh, insect repellant (DEET jacket)- small size, UI: EA
8415-01-035-0847	Parka, fabric mesh, insect repellant (DEET jacket)-medium size, UI: EA
8415-01-035-0849	Parka, fabric mesh, insect repellant (DEET jacket)- large size, UI: EA
8415-00-935-3130	Head net, insect, UI: EA

Antimalarial Drugs.

NSN	Nomenclature/Ordering Information
6505-00-117-6450	Chloroquine phosphate 500 mg tablets, 500s, (contains 300 mg base) UI: BT, AAC: "D"

6505-01-153-4335	Doxycycline 100 mg tablets, 500s UI: BT, AAC: "D"
6505-01-315-1275	Mefloquine 250 mg tablets, 25s UI: PG, AAC: "D"
6505-00-913-7905	Chloroquine/Primaquine phosphate, tablets, Individually sealed, 150s, UI: BX, AAC: "L"
6505-00-299-8273	Primaquine phosphate 26.3 mg tablets, 1000s (contain 15 mg base) UI: BT, AAC: "L"